Keep Encouraging Young-driver Safety (KEYS) Pilot Study: Increasing Parent Involvement in Teenage Driving through Driver Education

Prepared by:
David Huff
Traffic Education Director
Montana Office of Public Instruction
And
Jessica Hartos, PhD
Assistant Professor
University of North Carolina - Charlotte

On behalf of

Montana State University – Northern
PO Box 7751
Havre, MT 59501

A proposal prepared for the

Montana Department of Transportation
2701 Prospect Avenue
Helena, MT 59620-1001

March, 2008

Table of Contents

KEYS PILOT STUDY

1 Problem Statement

Teen driving is deeply rooted in the American and Montana culture, but, unfortunately, crashes are the leading cause of death and injury among teens ages 14 to 19. Producing "safe" teen drivers was traditionally the role of driver education in the schools; however, institutionalized limitations and evolving complexities of driving and the highway transportation system reduced its effectiveness. Given that safe driving is a product of more than just knowing how to maneuver a car, current efforts to produce safe teen drivers must reinvent traditional institutions of the past and focus on innovative solutions; we must change the "culture of teen driving," and graduated driver licensing (GDL) was the first major step in doing so (Hartos & Huff, 2007). GDL has established a drawn out process for teenagers to gain a full-privilege license, including mandating phases for increased practice driving and restricted independent driving. No longer can teenagers under 18 get a permit and then days later get an unrestricted license.

However, to ensure that the benefits of GDL are realized, all three countermeasures that address teen driving risk—GDL, driver education, and parent involvement—need to be integrated. Most GDL policies require parent- or adult-supervised practice during the learner's permit phase, but "requiring it" and having it done thoroughly and well are not necessarily the same thing. Therefore, integrating parent involvement into driver education could ensure that parents get the necessary information and instruction for supervising practice driving from a highly-qualified source. In addition, although GDL restricts teen independent driving during the provisional licensing phase, restrictions vary from state to state and rarely approach the strictest limits that would be consistent with teen driver safety research. Thus, driver education could also provide parents with the knowledge and resources necessary for limiting teen independent driving under high-risk conditions during restricted and unrestricted licensing phases.

Over the last decade, evidence-based strategies to successfully increase parent involvement in young driver safety have been identified, including to: (a) target parents in programmatic efforts, (b) promote high initial parent expectations for young driver safety, and (c) expose parents to goal-oriented persuasion (see review, Hartos & Simons-Morton, 2006). And, although research indicates that parents want and need information about issues related to young driver safety (Simons-Morton, 2007), simply providing it is not as effective at increasing parent involvement as desired (see review, Hartos & Simons-Morton, 2006; see review, Simons-Morton & Ouimet, 2006). In the field of educational psychology, research shows that parent involvement in children's education (in which public or private driver education clearly falls) can be increased by clearly defining parent roles and responsibilities and inviting parents to participate (Deslandes & Bertrand, 2005; see review, Hoover-Dempsey et al, 2005).

Our preliminary research with 321 parents of teenagers enrolled in driver education throughout Montana, where the proposed project will be conducted, indicates that 76% of parents believe that they should be required to be involved in driver education; most want parent information and instruction from driver education on many topics related to young driver safety; many want information about how to assess their teenagers' progress; and most would prefer written materials sent home (Hartos & Huff, 2006, 2007). Thus, integrating parent involvement into the driver education curriculum by having parent-teen "homework assignments" would not only provide parents with consistent, timely, and quality information and instruction about young driver safety, but it may also increase parent motivation to supervise, restrict, and monitor their teenagers' driving.

2 Project Objectives and Benefits

The goal of the KEYS Pilot Study is to determine the feasibility of integrating parent-teen homework assignments into the Montana driver education curriculum and family support for the use of these homework assignments to increase the effectiveness of parent involvement in supervised practice and restriction of teen driving.

The objectives of this project are to:

1. Engage parents in driver education programs through parent-teen homework assignments.
2. Provide parents with information and tools to more effectively supervise their teens' practice driving and assess their teens' driving skills and readiness.
3. Develop the materials needed to accomplish objectives 1 & 2 utilizing an interdisciplinary group of expert driver educators, driver education policy makers, and young driver safety researchers.
4. Utilize qualitative feedback from driver education instructors, teens, and parents about the process, materials, and effectiveness of involving parents in driver education to assess and revise the materials based on it.

Because Montana implemented its graduated driver licensing (GDL) laws in July 2006, there is elevated public curiosity and interest in the effects of GDL. The Keys Pilot Study would take advantage of this increased interest and provide families with additional information and tools that can help parents successfully navigate their changing roles through the GDL process. In addition, the results of this pilot study will provide valuable information about whether the use of parent-teen homework assignments is practical in driver education classes and supported by families.

Further, this KEYS Pilot Study will provide the basis for a future crash prevention effectiveness study to increase parent involvement in driver education classes; the findings of which will have implications for research, practice, and policy beyond this study. The future crash reduction effectiveness study will provide valuable information

about whether integrating parent involvement into driver education is practical and effective within different environments and for different population groups, as well as whether it is an effective approach for increasing parent supervision, restriction, and monitoring of teenage driving and reducing young driver risk.

3 Research Proposal

In this pilot study, a multidisciplinary team that includes a researcher (Dr. Hartos), state program manger/policy maker (Mr. Huff), university professional development provider (Montana State University - Northern), state traffic education association executive secretary (Mr. Carroll), and practitioners, including experienced driver education instructors, will develop, adapt, and pilot-test parent-teen homework assignments for use with the driver education curriculum. Homework assignments will utilize the evidence-based strategies to increase parent involvement, which are to include parents in programmatic efforts; promote parent establishment of strict initial expectations for young driver safety; expose parents to goal-oriented persuasion; and clearly define parent roles and responsibilities and invite parents to participate. Qualitative data will be collected from participating driver education instructors, teenagers, and parents throughout the process to capture their thoughts and feelings about parent involvement in driver education and use of parent-teen homework assignments, and any suggestions for any improvements.

This pilot study is a joint project of Montana State University – Northern (MSUN), the Montana Traffic Education Association, The Traffic Education Unit of the Montana Office of Public Instruction, and Dr. Jessica Hartos, young driver safety researcher with the University of North Carolina, Charlotte, and former research fellow with the National Institute of Child Health and Human Development.

Conceptual Model: The conceptual model for the pilot study and the future and larger effectiveness study is shown in Figure 1. The overall model represents an inquiry into how to effectively integrate parent involvement into driver education to increase young driver safety. The KEYS Pilot Study focuses on the development and pilot testing of the intervention materials and is represented by the colored ovals.

4 Implementation Plan

There are four phases for implementation of the KEYS Pilot Study.

Phase 1: Assemble the research team. This phase will include assembling the KEYS Pilot Study project staff and identifying driver education instructors for inclusion in the curriculum design team to develop and pilot test intervention materials. In this phase, the following will be determined: scheduling, timeline of events, individual

responsibilities, and participating driver education instructors and school sites for pilot testing.

The following are the project partners and staff and the duties that they will perform:

1) MSU-Northern: Project Manager
   a) Contract with Montana Department of Transportation (MDT) to conduct the KEYS Pilot Study
   b) Supervise, track, record, and report the distribution of all project monies
   c) Submit all project reports to MDT

2) Jessica Hartos, PhD: Senior Research Scientist
   a) Consult on all aspects of the project
   b) Design all scientific functions in collaboration with project staff
   c) Guide curriculum design team
   d) Oversee processes to assure accuracy and validity of processes and materials
   e) Provide scientific analysis and reports
   f) Estimate of time for project: 190 - 220 hours (In-Kind Contribution)

3) David Huff, MS: OPI Traffic Education (TE) Coordinator
   a) Provide Montana TE information and program data as needed
   b) Assist with all general project issues as needed
   c) Assist with engagement of educational community and schools as needed
   d) Serve on the curriculum design team
   e) Estimate of time for project 175 – 200 hours (In-Kind Contribution)

4) James Carroll, MA: MTEA Executive Secretary; Project Coordinator
   a) On behalf of MSUN, keep records necessary to track, record, and report the distribution of project monies for staffing, participant incentives, and necessary goods and services
   b) Work closely with the Logistics Coordinator and Driver Education Coordinators in distributing and recording use of project monies
   c) Assist in gaining support of schools and instructors for pilot study
   d) Serve on curriculum design team
   e) Estimate of time for project: 40-48 hours

5) Logistics Coordinator: TBD (1)
   a) Person affiliated with MTEA or other person familiar with the MTEA community who is experienced in determining and managing logistical issues in projects across the state
   b) Coordinate, maintain, distribute, and keep detailed records for program materials to schools and incentives to participants, and coordinate logistics for project training workshops
   c) Provide administrative support to curriculum design team
   d) Estimate of time for project: 60-70 hours

6) Driver Education (DE) Coordinators, TBD (2)
   a) Two driver education teachers recognized for their expertise and leadership in traffic education (likely those recognized as Montana "Driver Education Teachers of the Year")
   b) As members of the curriculum design team, serve as "experts" representing different regions and populations to adapt intervention materials, methods, and strategies for parent involvement in teen driver education
   c) Travel and serve as liaisons to DE instructors participating in the pilot testing, provide technical assistance to instructors, and have weekly contact with DE instructors throughout the project.
   d) Pilot test materials with families and a DE class
   e) Estimate of time for project: 40-48 hours

7) Project Advisors – Driver Education Teachers (3)
   a) Serve on curriculum design team
   b) Attend two meetings to adapt/develop/modify parent-teen homework assignments
   c) Provide comments and advice as requested
   d) Estimate of time for project: 8-16 hours (Volunteer – no stipend)

8) Schools with a Driver Education Program TBD (4)
   a) Provide access to students and their parents
   b) Provide use of facilities and equipment for pilot testing as part of regular driver education class
   c) Generally accommodate the pilot testing as needed
   d) Estimate of time for project: 1-2 hours plus use of facility (no stipend)

9) Driver Education Teachers TBD (2)
   a) Receive training on use of parent-teen homework assignments
   b) Incorporate assignments into the instruction of driver education
   c) Conduct and collect parent and teen feedback as needed
   d) Provide teacher feedback on use of homework assignments
   e) Modify instruction as needed and directed by the project team
   f) Serve as project advisor and on curriculum development team
   g) Other as appropriate and needed
   h) Estimate of time for project: 8-10 hours covered by stipend (8-16 hours donated same as project advisors, see item 7 above)

Phase 2: Design the parent-teen homework assignments. Identify priorities and develop/adapt materials and instructional processes into the driver education curriculum. Determine number, content, and "scoring" of homework assignments. Construct and print preliminary versions of ideas, content, and instructions.

Resources for this process:

1) Montana novice driver crash data

2) Survey data for parent involvement in teen driver education conducted by Hartos, Huff, and MTEA in 2005 and 2006
3) Published teen driver materials developed for use with parents
4) Research about parent roles and responsibilities for teen drivers
5) Experiential knowledge of Montana driver educators on curriculum team
6) Other

Phase 3: Pilot test parent-teen homework assignments. Train driver education instructors for pilot testing materials with individual families and collect qualitative feedback from individual instructors, parents, and students. Assess and modify materials based on feedback. Construct and print revisions of homework assignments and pilot-test homework materials in actual driver education classes. Collect qualitative feedback from participants. Assess and modify materials based on feedback. Finalize electronic version of product.

Phase 4: Submit final report. Analyze final project assessments with schools, teachers, parents and teens, write-up results from all feedback, and submit final report.

Implementation Timeline:
A proposed timeline is provided in Table 1. This timeline will be amended and added to as needed by project staff in Phase 1, including the inclusion of dates of actual driver education classes offered by the schools selected for use in this project.

5 Budget

Consultant, Dr. Jessica Hartos		$2,500
Printing		5,000
Misc Supplies		1,000
Travel and Per Diem for Project Staff and Advisors		3,550
Participant Incentives: Schools, Instructors, parents		4,240
Project facilitation stipends (3 @ $1,000 & 1 @ $1200)		4,200
Postage/Delivery		750
Telephone/fax		750
Administrative fees (MSUN $1500 & MTEA $1,000)		2,500
TOTAL	$	24,490.00

In-Kind Contribution		
Professional Time	Dr. Hartos	$7,000 (10% of time)
	David Huff	$5,000
TOTAL In-Kind		$12,000

Budget Narrative:

Contracted Services – Consultant

The daily contract fee for attending meetings in Montana for this project is $625/day and includes two, two-day trips ($2,500 total). This fee will pay for travel to and accommodations in Montana. Additional professional consulting services are provided as an in-kind contribution—see budget. Dr. Hartos will provide intellectual oversight to the project linking research protocols, findings, and recommendations to efforts of product developers and to product testing, and to ensure the product will meet requirements for the anticipated research project funded by the NIH.

Supplies & Materials

Printing costs of $5,000 will cover costs to print materials developed by this project, which will then be distributed to schools for pilot testing with students and parents. Published research indicates that printed materials have a much greater impact upon parents and teens when in color and have a professional appearance.

Misc. Supplies of $1,000 will cover a variety of items like the cost of product packaging, envelopes, meeting supplies, tablets, etc.

Travel Expenses and Per Diem

The Montana-based research staff and advisors will attend two, two-day meetings: one for a curriculum design team meeting and one for training for pilot –testing. This includes travel for 8 individuals, including 1 Project Coordinator, 2 Driver Ed Coordinators, 3 Project Advisors and 2 Teacher/Project Advisors. Travel will be reimbursed to individuals at state rates, currently $.51 per mile, room rate of approximately $70 per night and in-state meals at $23/day. Some individuals will travel farther than others, but an average of $200 per individual per meeting is used to build the budget – 8 individuals for 2 meetings is 16 travels at $200 is $3,200. The remaining $350 is for the Project Coordinator and the Driver Ed Coordinators to travel to schools during the pilot testing in phase 3 (as needed) to monitor and provide technical assistance, and any other miscellaneous travel that may be needed. Total travel $3,550.

Any travel by David Huff will be provided by the Office of Public Instruction and considered an in-kind contribution.

Incentives and Stipends

Participating family members and instructors will receive incentives and stipends. For individual family pilot testing, there will be 16 parent-teen dyads at $40 (2-4 hours each) or $640 and two teachers (position 4.9) to facilitate the individual family pilot testing at $100 each (4-5 hours each), or $200. The two DE Coordinators (position 4.6) will also pilot test individual families, but receive their stipends as part of their DE Coordinator staff roles. For pilot testing in classes, there will be up to 80 parent-teen dyads at $40 per dyad (2-4 hours each) or $3,200 and two teachers (position 4.9) to facilitate the small class pilot testing at $100 each (4-5 hours), or $200. The two DE Coordinators (position 4.6) will also pilot test small classes, but receive their stipends as part of their DE Coordinator staff roles. The total for pilot-testing incentives to teachers and parent-teen dyads is $4,240.

Project staff facilitation stipends (positions 4.4; 4.5; & 4.6). Stipends are based upon 12 months or 4 quarters of project facilitation at $1,000 flat fee per staff person (40-48 hours/year) payable quarterly at $250 per quarter (10-12 hours/quarter), with the exception of the Logistics Coordinator (position 4.5) who will receive $300 per quarter (15-18 hours/quarter) or $1,200 for the project (60-72 hours/year). Stipends will be provided to the Project Coordinator, two Driver Education Coordinators, and the Logistics Coordinator for a total staff cost of $4,200.

6 References

Deslandes, R., & Bertrand, R. (2005). Motivation of parent involvement in secondary-level schooling. The Journal of Education Research, 98(3), 164-175.

Hartos, J.L., & Huff, D.C. (Spring 2006). To what extent are rural parents involved and willing to be involved in driver education? The Chronicle (published by the American Driver & Traffic Safety Education Association (ADTSEA)), 3-8. Available at: http://www.adtsea.iup.edu/adtsea/thechronicle/default.aspx.

Hartos, J.L., & Huff, D.C. (2007). Changing the culture of teen driving: Integrating parent involvement and driver education. In Adolescent Behavior Research Frontiers. Nova Science Publishers, Inc: Hauppauge, NY.

Hartos, J.L., & Simons-Morton, B.G. (2006). Parents and their newly-licensed teen drivers: Promoting parent management of novice teen driving (pp. 284-302). In D. M. Devore (Ed), New Developments in Parent-Child Relations, Nova Science Publishers; Hauppauge, NY.

Hoover-Dempsey, K.V., Walker, J.M.T., Sandler, H.M., Whetsel, D., Green, C.L., Wilkins, A.S., & Clossen, K. (2005). Why do parents become involved? Research findings and implications. The Elementary School Journal, 106(2), 105-130.

Simons-Morton, B.G. (2007). Parent involvement in novice teen driving: Rationale, evidence of effects, and potential for enhancing graduated driver licensing effectiveness. Journal of Safety Research, 38, 193-202.

Simons-Morton, B.G., & Ouimet, M.C. (2006). Parent involvement in novice teen driving: A review of the literature. Injury Prevention, 12(Suppl 1), 30-37. Available: http://ip.bmjjournals.com/cgi/content/full/12/suppl_1/i30. Accessed October 25, 2006.

.

7 Appendices

Figure 1. Conceptual Model for Integrating Teen Driver and Parent Education – Pilot Test Study represented by colored ovals

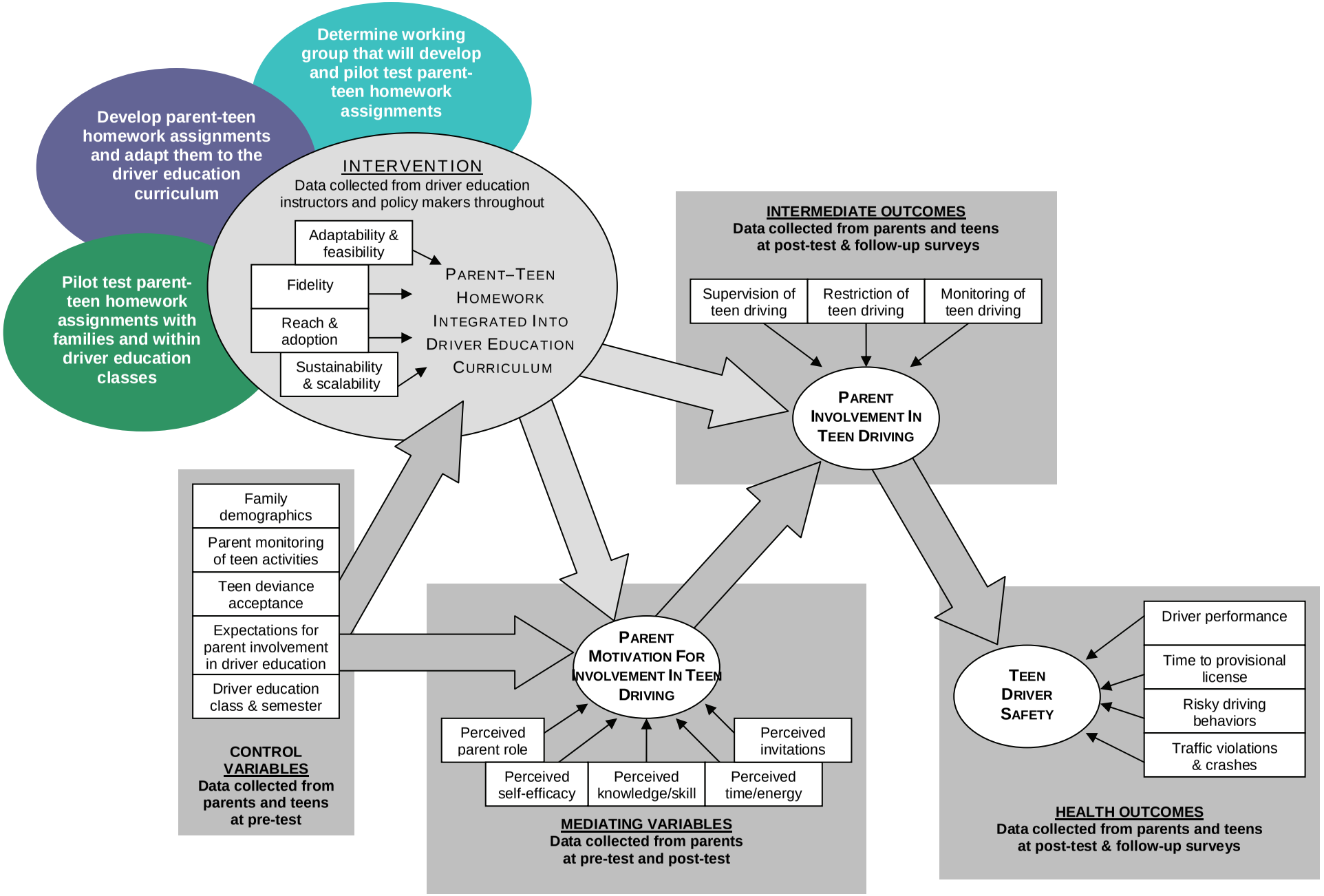

Table 1. Sample Timeline Implementing Montana KEYS Pilot Study

	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Determine project staff	X											
Determine meeting schedules and responsibilities	X											
Determine number, content, and "scoring" of homework assignments		X	X	X								
Develop, construct, and print preliminary versions of ideas, content, and instructions			X	X								
Train instructors for pilot testing materials				X								
Collect qualitative feedback from individual parents, students and their instructors				X	X							
Revise homework assignments based on feedback					X	X						
Train instructors for pilot testing materials						X	X		X			
Collect qualitative feedback from small classes that use homework assignments							X	X	X	X		
Revise homework assignments based on feedback										X	X	
Finalize electronic version of product											X	X
Prepare and submit final report											X	X